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Conference for the restoration of European estuaries:
Ideas, approaches and implementation
(22.02.2013 in Leer, Germany)

Lessons learned (final discussion):

1. **Estuaries are habitats that are endangered Europe-wide.** Therefore, substantial efforts are necessary to achieve the statutory good state of preservation for these large European estuaries.

2. There is a **„tipping point" of an estuary**. In case of an already prestressed condition, one additional development measure can lead to a **"regime shift"**, e.g. altered sediment dynamics that add up and accelerate by itself ("snowball-effect"). Subsequently, action to restore the river Ems is urgently needed.

3. If an estuary has already passed its „tipping point", a restoration can only successfully be implemented through considerable financial and expansive measures.

4. Before ecological damages must be repaired, damages should be avoided in the first place. (Rule of "no deterioration" of the EU Water Framework Directive and Flora-Fauna-Habitat Directive)

5. Stronger compliance of the **principle of prevention**: Risky projects must not be implemented as long as it cannot be excluded that they culminate to reach the "tipping point".

6. Win-win effects: Regarding the chances for realization and acceptance, restoration benefits from a combination with other targets, e.g. flood protection or tourism. Integrated solutions / master plans (e.g. Schelde) are productive. Here, it is advantageous to accompany development and implementation by an interdisciplinary working group.

7. **Habitats are faster destroyed than the can be restored**. It may take 20 years or longer until some of the development goals can be met.

8. The construction of tidal polders with a barrage can serve as a compromise between the claims **to give the river more space** and to shift the dyke back on the one hand and to maintain the existing dyke line on the other. It is possible to develop typical estuarine habitats through the construction of tidal polders.

9. If the area is large enough, natural typical estuarine habitats, species community and processes and also wet grassland areas can be developed simultanelously. The development of wet grassland on former agricultural areas can be achieved through systematic management.

10. Tidal polder not only counteract the lack of estuary habitats with tidal influence, they can also serve as measures to adapt to climate change.

11. The **integration of the public and access to the area rises the acceptance** also for larer restoration projects.

12. **Large and complex problems cannot be solved through small simple measures**. (large measures are possible (e.g. Belgium and Great Britain) – condition: political volition

13. The quantification of the ecological, cultural functions is important to account among other things the demand for land (ecosystem services)

14. Estuarine research is important, compared to other countries the database in Germany is poor.

15. The ecological resilience of the large estuaries either being stressed to its limits or has been exceeded already. Instead of deepening estuaries any further, vessels must be customized to the ecological limits of estuaries.